DOCUMENT RESUME

ED 316 669 CE 054 269

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|---|---|
| TITLE | Practical Solutions to the Future Workforce Needs of Wisconsin. Public Hearing (Madison, Wisconsin, October 18, 1989). |
| INSTITUTION | Wisconsin State Council on Vocational Education, Madison. |
| PUB DATE | 18 Oct 89 |
| NOTE | 37p. |
| PUB TYPE | Viewpoints (120) -- Collected Works - Conference Proceedings (021) |
| EDRS PRICE | MF01/PC02 Plus Postage. |
| DESCRIPTORS | Adult Education; Articulation (Education); Cooperative Programs; Disabilities; Dropouts; Employed Women; Employment Patterns; High Risk Students; Postsecondary Education; *School Business Relationship; Secondary Education; *Statewide Planning; *Success; *Vocational Education |
| IDENTIFIERS | Wisconsin; *Workplace Literacy |

ABSTRACT

Presenters at a public hearing testified about strategies that were working and those that were considered not to be working in the Wisconsin vocational education system. The strategies that were cited as "working" were: education provided to businesses by VTAE (Vocational-Technical Adult Education district) colleges; interaction between business and education; collaboration among entities, such as the Job Centers; support of organized labor for training; onsite literacy training for workers; high school vocational programs that are becoming updated; cooperation between high school and postsecondary programs; and services to at-risk students. Among those strategies cited as not working to the extent necessary to meet work force needs or factors affecting such strategies were: variations in responsiveness by VTAE colleges; employees' lack of basic literacy, problem-solving, and interpersonal skills; the need for more agency collaboration; the skilled worker shortage and the need to train the handicapped and disadvantaged; discrimination against older workers; effects on high school vocational programs of new graduation and university requirements; the need for workers to function in a global work force; increased demands on schools and the dropout rate; the need for more career counseling for youth and adults; and the fact that women are clustered in traditionally lower-paid jobs. Recommendations included: expansion of literacy program efforts with the assistance of additional state funding; implementation of an educational model by the Department of Public Instruction that would provide every student the best opportunity to become functionally literate; and changes in the VTAE policies to enable the VTAE colleges to become more responsive to the changing needs of business and industry and to prepare the system to meet the work force needs of the next century. (CML)

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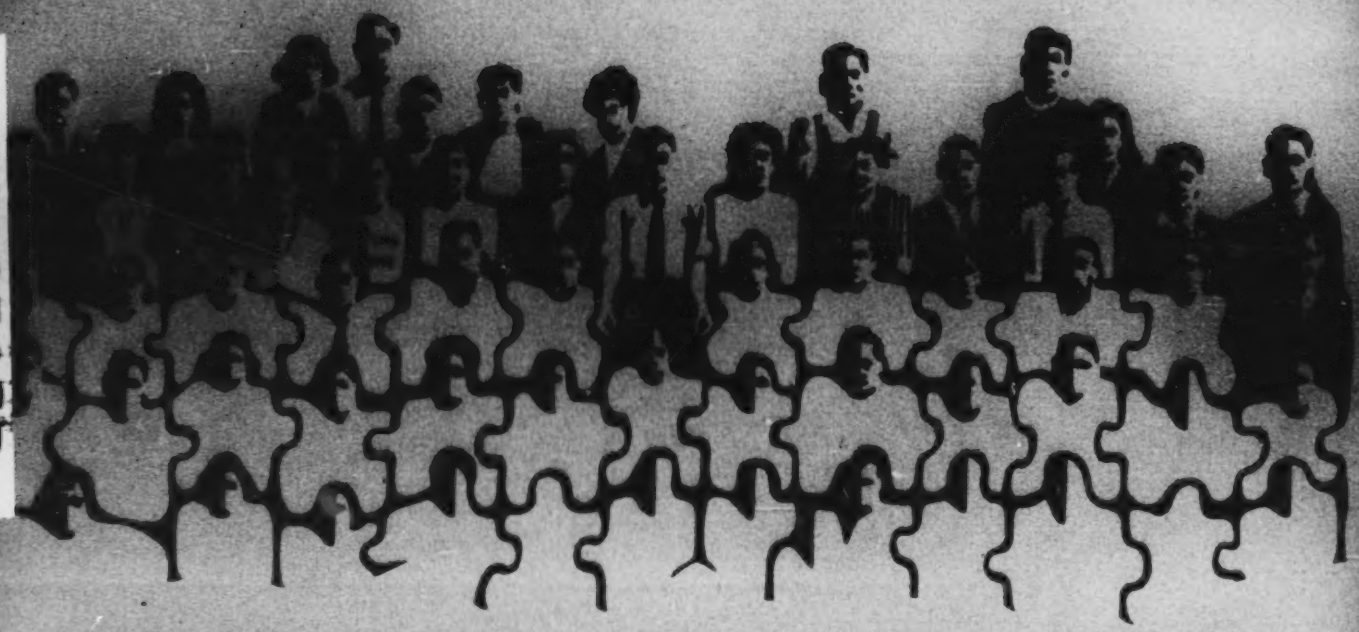
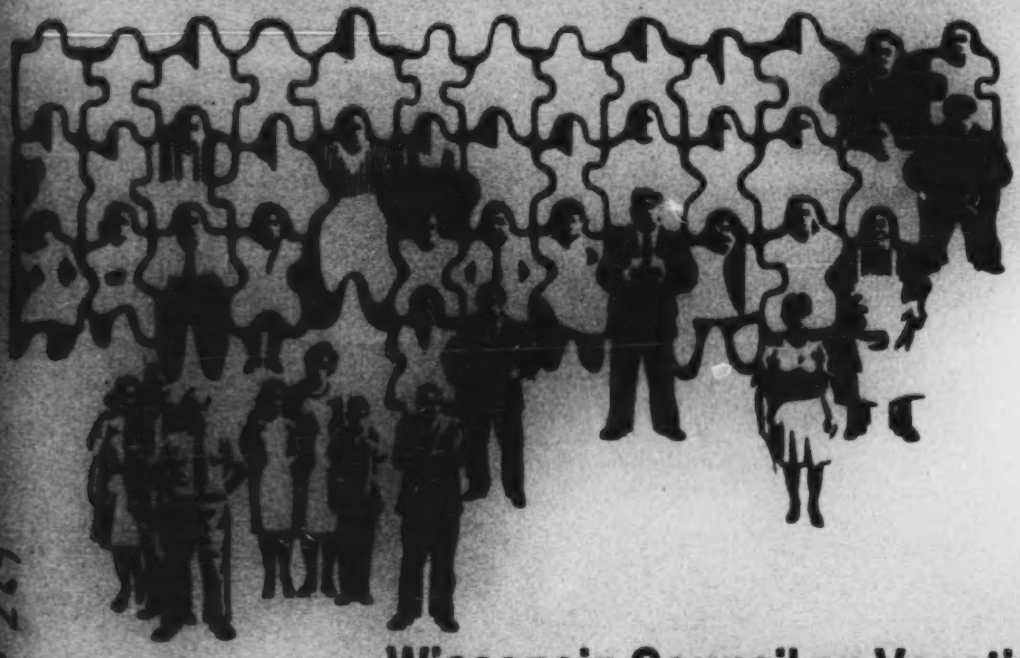


# PRACTICAL SOLUTIONS TO THE FUTURE WORKFORCE NEEDS OF WISCONSIN



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## Wisconsin Council on Vocational Education

## (W/COVE)

## Public Hearing, October 18, 1989

CG 054 269

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Dennis Vandenbergen, Chairman

FROM THE CHAIRMAN --

I am proud to have been elected to serve as Chairman of the Wisconsin Council on Vocational Education for FY 1989-90. Council appointments, by Governor Tommy G. Thompson, represent a professional group of individuals from various categorical segments of our state including small business, agriculture, education, labor and special populations.

The Wisconsin administration and the Wisconsin Council on Vocational Education believe secondary (K-12) and postsecondary vocational education programs to be intrinsically important to formulating successful and long-term economic development. Vocational/technical programs are essential ingredients to extend and enhance quality education for employment.

Recognizing the impending labor shortage, the Council undertook efforts to develop practical solutions to the future workforce needs of Wisconsin. We hope this report will be beneficial in developing state solutions to a critical need.

Dennis Vandenbergen

DV:ST:tm
1/17/90

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## ACKNOWLEDGMENTS

The Wisconsin Council on Vocational Education expresses appreciation to all those who provided testimony, either verbal or written, for the public hearing. The willingness of these concerned individuals to share their views has resulted in a report that is broadly representative of business, government and vocational education, both secondary and post-secondary.

The Council also wishes to thank Dr. Kathleen Paris, PARIS and ASSOCIATES, Madison, for providing analysis and comment on the hearing.

## INTRODUCTION

The Wisconsin Council on Vocational Education is authorized and funded by Congress under Public Law 98-524, Section 112, of the Carl D. Perkins Vocational Education Act (1984) which is reprinted beginning on page 24 of this report.

The primary role of the Council is to review programs and services funded under the Perkins Act. In addition, a broader oversight role of vocational education issues in the State of Wisconsin is undertaken.

Requirements of the law include providing for "not less than one public meeting each year at which the public is given an opportunity to express views concerning the vocational education program of the State."

The Council, responding to the Act's requirements, held a public hearing on Wednesday, October 18, 1989, in Madison, at the East Towne Suites. The topic: **"Practical Solutions to the Future Workforce Needs of Wisconsin."** The hearing attracted speakers from throughout the State.

(Earlier in the year, on April 6, 1989, the Council had held a public hearing on "The Future of the Skilled Workforce in the Milwaukee Area" at Milwaukee Area Technical College.)

This report is based on testimony presented both verbally and in written form. Recommendations by the Council are intended to be constructive and beneficial to the delivery of vocational education programs and services in the State of Wisconsin.

## EXECUTIVE SUMMARY

The Wisconsin Council on Vocational Education held a public hearing on Wednesday, October 18, 1989, in Madison on **"Practical Solutions to the Future Workforce Needs of Wisconsin."** Many of the strategies that were cited as "working" were also cited as "not working." That is, they were not being implemented to the extent necessary to meet workforce needs.

Some of the things that are "working," according to testimony: education provided to businesses by VTAE colleges; interaction between business and education; collaboration among entities, such as the Job Centers; support of organized labor for training; on-site literacy training for workers; high school vocational programs that are becoming updated; cooperation between high school and post-secondary programs; services to "at risk" students.

Among factors cited as "not working" were: variations in responsiveness by VTAE colleges; employees' lack of basic literacy, problem-solving, and interpersonal skills; the need for more agency collaboration; the skilled worker shortage and the need to train the handicapped and disadvantaged; discrimination against older workers; effects on high school vocational programs of new graduation and university requirements; the need for vocational instructors to be updated through experience in business and industry; the need for workers to function in a global workforce; increased demands on schools and the drop-out rate; the need for more career counseling for youth and adults; and the fact that women are clustered in traditionally lower-paid jobs.

## RECOMMENDATIONS

**The Wisconsin Council on Vocational Education recommends that the:**

**1. Wisconsin Board of VTAE and local VTAE colleges expand adult literacy programs and efforts with the assistance of additional state funding.**

**2. Department of Public Instruction (DPI) propose and implement an appropriate educational model that will provide every student with the maximum opportunity to become functionally literate.**

**3. Wisconsin Board of VTAE policies be updated to enable VTAE colleges to be more responsive to the changing needs of business and industry in Wisconsin, to be more active in economic development efforts, and to prepare the system to meet workforce needs of the 21st century.**

## HEARING PRESENTERS

Eloise Anderson, Administrator, Division of Community Services, Wisconsin Department of Health and Social Services, Madison

Howard Anderson, Counselor, Lakeshore Technical College, Cleveland

Rich Cornell, Manager, Employee and Organization Development, Cray Research, Inc., Chippewa Falls

Gary Cullen, Project Planning Manager, General Motors, Janesville

Richard Dignan, Director, Bureau for Vocational Education, Wisconsin Department of Public Instruction, Madison

William Drury, Training Director, Southwest Private Industry Council, Dodgeville

James Frymark, Economic Development Program Manager, Bureau of Development Finance, Wisconsin Department of Development, Madison

Sharon Harkins, Vice President and Director, Human Resources General Casualty Company, Sun Prairie

Robert Haskins, Personnel Director, KSG Industries, Inc. Marinette

Ronald Hustedde, Economist, Wisconsin Board of Vocational, Technical and Adult Education, Madison

Paul Jordan, President, Milwaukee Minority Chamber of Commerce

Ying Lee, Division of Economic Support, Refugee Assistance and Poverty Programs, Madison

Brent Mallek, Personnel Manager, the Wisconsin Cheeseman, Sun Prairie

Michael Marcks, Vice President, Local 95 UAW, UAW 530 Training, Janesville

Rene Mellberg, Technical Training Manager, Proctor and Gamble Paper, Green Bay

Donald McDowell, Chairman, State Advisory Committee on Agriculture, Montello

Dennis Nitschke, Dean, Economic Development Division, Fox Valley Technical College, Appleton

HEARING PRESENTERS, continued

Michael O'Brien, President, Local 95 UAW, Janesville

Roland Odland, Division of Employment and Training, Wisconsin Department of Industry, Labor and Human Relations, Madison

Michael Schmidt, Training Manager, Ansul Fire Protection, Marinette

Beverly Simone, Director, Madison Area Technical College

Jane Svennig, Division Chairperson, Adult and Continuing Education and Economic Development, Blackhawk Technical College, Janesville

Andy Suess, Vocational Director, Cooperative Educational Services Agency #10, Chippewa Falls

WRITTEN TESTIMONY

Barbara Bielmeier, Chair, Education Task Force, Two-Rivers/Manitowoc Area Chamber of Commerce (with Dean Rolland Baldwin, Jacqueline DeBaker, Frank Helquist, Roger Imhoff, Larry Jones, Gary Princl, Don Howell and Alice Sebora.)

Madi Catalano, Career Assistance, Quad/Graphics, Inc., Lomira

Gerald M. Costello, UAW Local #72, Southwestern Wisconsin Labor Management Council, Kenosha

Jim Feyrer, Craftsman Siding, Slinger

Dick Glynn, Glynn Accounting and Tax, Slinger

Elaine Muehlius, Director of Nursing, Hope Nursing Home, Lomira

Debbie Newton-Tainter, Employee Services Manager, Department of Employee Relations, Wisconsin Power and Light Company, Madison

Jim O'Conner, President, Lomira Auto Sales and Service, Inc.

Lee Rasch, District Director, Western Wisconsin Technical College, LaCrosse

Ken Reiser, M-B-W, Slinger

John P. Ruminski, Personnel Manager, Slinger Manufacturing Company, Inc.

Mary Jane Zdroik, Wisconsin citizen, Rosholt

## SUMMARY OF TESTIMONY

The invitation from the Wisconsin Council on Vocational Education to testify at the hearing "Practical Solutions to the Future Workforce Needs of Wisconsin" contained three questions:

1. What is working?
2. What is not working?
3. What are your specific recommendations for improvement including innovative and/or new ideas)?

Two patterns emerged among the twenty-four verbal and thirteen written testimonies presented. First, regardless of the type of business or enterprise, the responses were remarkably similar. Second, many of the strategies that are "working" were also cited among those that are "not working." That is, the strategies were not being implemented as rapidly or as widely as necessary to meet workforce needs.

## WHAT IS WORKING?

1. Vocational, Technical and Adult Education colleges (VTAE) have been extraordinarily responsive to requests of business for customized skill and literacy training. Comments included, "Northeast Wisconsin Technical College has done a great job of responding to our needs when business expresses it." "Vocational-Technical education has been very responsive. They try to meet our needs. It's very refreshing." "The strength of the vocational system is its ability to respond immediately."

The cooperative effort between Blackhawk Technical Institute and GM in Janesville for customized training for production of the medium-body truck was cited as exemplary. (Department of Development and Wisconsin Board of VTAE funds were also utilized.)

2. Employer incentives such as day care and transportation can be effective for attracting and retaining employees. The Wisconsin Cheeseman representative testified that their bussing program has been very successful. The Sun Prairie company provides bus transportation to and from work for employees from surrounding rural areas. Another company represented pays for any coursework employees elect to take.

The pool of 16-19 year-old potential employees has shrunk nationally and in Wisconsin. This demographic shift in the traditional source of entry-level employees means 50-60,000 less workers available in Wisconsin. Thus employers are offering incentives that were not necessary in the past.

3. VTAE college career advising centers are providing essential career direction and planning services for many people.

4. Surveys of business and industry needs are "appreciated" by the business community and need to be continued. Moraine Park Technical College was cited for its survey to determine core competencies required by employers. Those competencies are being built into the curriculum.

5. Collaboration among entities, whether public or private, is becoming more common than in the past. An example is the Job Center which provides "one stop shopping" for those seeking employment as well as for employers seeking workers. Job Centers, of which there are four pilot sites in Wisconsin, combine the efforts of Wisconsin Job Service, the Job Training Partnership Act (JTPA), VTAE colleges, and other human service agencies.

6. Organized labor in Wisconsin has been supportive of customized training programs such as the GM program provided through Blackhawk Technical College as well as playing a key role in developing and supporting on-site workplace literacy programs delivered by VTAE colleges.

7. VTAE adult basic education (ABE) classes also known as Goal-Oriented Adult Learning (GOAL) were cited as being highly successful. The availability of adult basic skills education was called "essential" in equipping people for jobs of the 21st century.

Of special note are the VTAE learning centers located on-site in plants. One employer said, "We could never have done it ourselves."

8. Wisconsin's high school vocational programs are being modernized. The Bureau for Vocational Education (BVE) of the Wisconsin Department of Public Instruction has published curriculum guides for agriculture, business, home economics, marketing, and technology education which emphasize information age skills. Additionally, the BVE has sponsored state-wide inservices for teachers on using the guides.

By recent statute, all high school districts in Wisconsin must have comprehensive vocational programs. Additionally, they must have business-education councils to help maintain dialogue with employers.

9. A significant number of high school vocational teachers are being upgraded through work-experience programs and DPI inservices.

10. High school and VTAE college districts are articulating with each other, especially through the contracting process which utilizes federal dollars to provide VTAE classes to high school students.

The "2 plus 2" program which involves two years of high school coursework and two years of post-secondary VTAE coursework shows great promise for providing the skilled workers required by business and industry.

11. All K-12 school districts have been mandated by state law to serve students who are "at risk" of dropping out of school with special programs and services.

## WHAT IS NOT WORKING

1. The degree to which an individual VTAE college is responsive to the needs of business and industry is dependent upon local college priorities.

2. Many employers still undervalue human resources. In the age of mass production, employees were seen as replaceable parts and considered an expense of production. In the information age, employees are an asset to be developed. Management, in many instances, has not fully adjusted to this change.

3. More realistic and comprehensive career education and counseling is needed both earlier in the educational process and throughout adults' working lives.

One employer testified that many people who apply for work cite "anything" or "factory" or "office" as the position in which they are interested. They have no clear idea of the type of work they seek.

A comment on the dearth of realistic career information and the unrealistic notions about work and careers perpetuated by popular television, "Nobody really works on t.v.."

4. The viability and effectiveness of advisory committees should be examined. Schools and the business community often have difficulty working together because they are "different worlds." Approaches are needed to utilize those differences as an advantage and to foster creativity.

In particular, advisory committees must be developed and utilized more effectively for future-forecasting. As one vocational-technical educator put it, "By the time we hear from employers about what they need, they needed it yesterday."

5. Coordination and collaboration among entities, whether public or private, is not consistently evident. One individual testifying urged that schools and the Department of Health and Social Services be forced to work together "instead of playing separately with the same families." The Council was told that stronger coordination criteria for JTPA and education and human service agencies were recently approved by the Wisconsin Jobs Council.

Although significant efforts have been made, more coordination and articulation between K-12 and VTAE programs is needed in every VTAE college district.

6. Post-secondary vocational-technical education is designed primarily as a pre-employment education. That is, programs are designed for full-time students who plan to begin work upon completing their training. This design does not square with workforce needs in several ways.

First, although Wisconsin employers have great need for continuing education for employees, it is provided to businesses by VTAE colleges as an "extra." Even though businesses pay fees, the fees, even for customized training contracts, do not cover the full costs of instructors' salaries and fringes, according to testimony. From the point of view of the VTAE colleges, it is more "profitable" in terms of FTE's to offer traditional associate degree courses than continuing education.

Second, the associate degree was originally designed in the early 1960's to be a terminal degree. Graduates presumably would have sufficient knowledge and training to last them throughout their careers. Today, technical knowledge becomes obsolete very quickly. Every occupation now requires a structured sequence of continuing education on a continuing basis. Yet VTAE colleges are still designed primarily to deliver pre-employment training.

Third, one individual described "...a black hole between the associate degree and the baccalaureate degree. What is there beyond the associate degree for the individual worker?" Although an advanced technical certificate exists, it is not common for most programs. A comprehensive community college model was recommended to provide a smooth transition between high school, post-secondary education, and the workplace. (Such a model would include collegiate courses as part of associate degree programs offered by VTAE colleges.)

Fourth, it was stated that the majority of students in the so-called "full-time" VTAE programs actually attend part-time. "People almost have to work to afford it, yet the programs are structured for traditional full-time students." It is generally difficult for people who work swing shifts to attend classes.

Fifth, "Too much of the vocational-technical curriculum is lock-step regardless of the rhetoric [about flexibility]...All the curriculum must be competency-based so that no one must repeat what they have already learned."

Sixth, the benefits of providing training on-site in plants and factories were stressed as the on-site training eliminates some of the trepidation about "school" felt by workers, many of whom may not have experienced formal education in forty years. In many cases, neither the businesses, nor the VTAE colleges are prepared to have instruction occur on-site, away from customary classrooms and labs. It was said, "We [VTAE] need to change our perception

of who we are accountable to and to see business and industry as our client."

7. While VTAE has strong "full-time" programs, this expertise may not be transmitted to the business community. Applied technology centers could be identified regionally to link education and business in specialized areas. Examples might be flexographic printing at Fox Valley Technical College, hazardous materials at Lakeshore Technical Institute, or laser technology at North Central Technical College.

8. The ability of VTAE colleges to serve business and industry with customized training is not adequately publicized. Contact must be made regularly with business and industry due to the mobility of people at all levels in business.

VTAE needs professional coordinators with experience in the private sector to link with business and industry rather than teachers attempting to fulfill this role during their prep time.

9. Reading, writing, communicating, problem-solving, and interpersonal skills such as teamwork, assertiveness and leadership--"They [workers] are not getting it. Whoever is responsible, it's not happening." The need for "basic skills" was a consistent theme throughout the hearing. "As the complexity of processes increases, we need a higher level of basic skills in workers."

It was reported that VTAE graduates score exceedingly well in technical competence. Seventy per cent of employers rate the technical competence of VTAE graduates as excellent or above average. Those same graduates receive lower scores for communications skills and problem-solving abilities.

Basic skills were defined rather broadly as the constellation of skills listed above attests. One employer reported that employees in his company "punch in" on a computer terminal, making computer literacy a basic skill. But inherent in every mention of basic skills was the fundamental need for literacy--for employees who can read and write at an acceptable level.

10. Related to the need for literate workers is the need for additional English-As-A-Second-Language training for people on the job. The lack of English proficiency was cited as a major employment barrier for immigrant groups. Two groups specifically mentioned were Hispanics and Hmongs.

11. The number of skilled workers is lagging behind employer

demand. Businesses are "stealing machinists from each other." The majority of workers, 80%, will need some training beyond high school, but less than a baccalaureate degree. Yet currently, more than half of Wisconsin's students do not go on to post-secondary education immediately following high school, according to the Department of Public Instruction.

Concurrent with a worker shortage, there is also "double-digit" structural unemployment in certain areas and among groups including minority youth. "There's something wrong with a system that has not addressed this [mismatch]."

Older workers, those age 50 and over, experience discrimination in hiring. As the worker shortage becomes more acute, the talents and skills of older workers must be better utilized.

12. The pace at which high school vocational programs are becoming modernized is not rapid enough to meet workforce needs. The programs are being hampered by "misapplication" of new graduation requirements and university entrance requirements. Enrollments in many vocational programs are down presumably because the courses do not "count" for university entrance requirements.

13. Instructors at both K-12 and VTAE levels need additional exposure to the workplace through work-experience or employee exchanges. For vocational instructors, "Coursework is of questionable value. Education cannot sustain itself. That's inbreeding. Education must go outside itself and use other ways to upgrade people...continuing certification may need to include a minimum amount of recent industry experience...Job exchanges should be two-year commitments, not short term, to create ambassadors who understand both worlds."

14. Different agency boundaries for VTAE districts, K-12 districts, JTPA, Wisconsin Job Service, Cooperative Educational Service Agencies, and the like, are a barrier to maximizing educational and human service dollars. "We are bound up in boundaries. If our focus is on the customer, we can't afford these walls."

15. Economic development in Wisconsin is fragmented between private companies, utilities, state and local government agencies, municipalities, and educational agencies. "There are a lot of players...It's hard to coordinate economic development."

16. "Our most valued resource is our instructors...and we are losing good ones [to industry]. We need to try to make them feel secure about their jobs, especially with changes such as the elimination of boundaries, and inter-district tuition."

17. Electronics is an area in which many more workers will need to be skilled than has been the case in the past. Several employers mentioned the knowledge of electronics required to operate machines used in production. "Machine operators are becoming technicians just to run their machines." "VTAE needs to be stronger in electronics [for production occupations]."

18. Women are still clustered in a narrow range of occupations and programs that are considered traditionally female and that pay less than traditionally male occupations. In that many of these women are heads of households, business and industry needs to be sensitized to their role as the primary source of income for their families, as well as their potential to succeed in a variety of occupations.

On-site customized training seems to have potential for opening up more non-traditional opportunities for women in that training occurs at the worksite and often involves career counseling. The General Motors-Blackhawk Technical College program cited earlier reported the percentage of women in the BTC coursework, approximately 35%, was much higher than for the regular on-campus equivalent. The regular program reported one female to 23 males, for a female participation rate of less than half of one percent.

19. Today's K-12 schools are structured for an agrarian economy both in terms of the school day and the months in which school is in session. High schools in particular need to offer more flexible schedules in that many students must be home to care for siblings and many high school students are parents themselves.

20. K-12 schools are being called upon to be too many things--parents, social workers, psychologists, teachers. Schools should not have to pay for ancillary social services, but rather should only be responsible for teaching students. To accomplish this, schools should not own their own buildings, but rather should be housed in multi-purpose community centers that can be utilized for the education of the whole family. These same school-community centers could house medical and human service agencies that would not be the financial responsibility of the schools but rather the community as a whole.

21. Both adults and children need to learn to appreciate and be comfortable with people from other cultures as America's economy is becoming increasingly more global and our worksites are becoming more multi-cultural. One large employer testified, "We must understand that the diversity of our employees (and students),

their experiences, and their backgrounds will be critical contributors to our success in the future. We must actively cultivate and manage this diversity."

22. The school drop-out rate remains a threat to an adequate supply of labor in Wisconsin.

23. The work ethic is not as strong as employers believe it should be. Several expressed the desire for workers to be trained in punctuality, being respectful, avoiding absenteeism, being thorough, and being persistent.

## ADDITIONAL TESTIMONY

1. Continuing education is a priority need of business and industry as employees need to be retrained throughout their lives. Fifty-two per cent of businesses utilize in-house trainers, meaning that the remaining 48% require training from outside sources.

2. The majority of Wisconsin Customized Labor Training Funds administered by the Department of Development went to businesses with less than 100 employees. Although 4,154 employees received training through the program, the demand for the funds far exceeds available dollars.

3. To meet workforce needs, non-traditional sources of labor will need to be found and trained including immigrants, retirees, displaced homemakers, welfare recipients, handicapped, disadvantaged. Examples include: bringing back retired teachers to work with full-time teachers; retraining older workers--The Southwestern Private Industry Council (PIC) was able to place more than their required number of older workers in jobs; providing education and training for participants in welfare reform programs such as WEJT to help them move into the full-time workforce.

4. The environment for agriculture education has changed dramatically. Just 40 years ago, 25% of agricultural jobs were on farms. Today, just 2% of agricultural jobs are on farms. Yet 20-30% of all the jobs in the United States are agriculture-based (food and fiber). High school and post-secondary agriculture programs must adjust to this change and move away from strictly production agriculture to a broader curriculum encompassing national and international sales, marketing, purchasing, distribution, inspection, and the like, of food and fiber. "Post-secondary has made a better adaptation to the changing ag environment than secondary has been able to." The program at East High School, Madison, was cited as a model, however.

5. The trend in education will be to more extremes in student attainment. The challenge for education is to increase the level of attainment for <u>all</u> students.

6. Technicians are the "glue of the workplace," yet their role is not clearly defined in Wisconsin. The technician must be considered a <u>new entity</u>. The technician should be able to:

-understand basic principles of technology
-connect theory to actual work
-identify and analyze problems
-integrate complementary work areas

-work independently
-work equally well with hands and mind
-be competent in mathematics, science, computer science

Employers will pay closer attention to non-college degree workers. These people are under-valued now.

7. Increasingly more physical, hard, dirty, and dangerous work will be done by machines. Human workers will find themselves with more responsibility and less direct supervision.

8. One individual testified, "Young people become involved in dealing drugs as an employment opportunity. Traditionally the vocational system has offered a legitimate alternative to the drug economy. This alternative must not be lost."

9. Education and business can only do so much to shape young people. The family must become much more involved. "You get what you accept."

10. "Poverty is a learned thing. We teach people to be poor...We are the only country in the world with fat poor people. We need to provide students with life skills teaching such as consumerism, managing money, sewing and cooking...We have lost the work ethic. Every student should have at least one semester of work experience."

11. Five areas of projected growth for Wisconsin include: telecommunication, computers, composite materials, computer-aided manufacturing, and biotechnology.

## CONCLUSIONS

1. Employee literacy is the most pressing workforce need identified by employers. Adult literacy education provided by the VTAE colleges was cited as an effective solution. Especially favored by employers is basic literacy education provided on-site in plants and factories. The demand, however, for adult literacy services far outdistances the ability of VTAE to provide it.

2. Customized training provided by VTAE colleges is an effective solution to the skilled worker shortage and the mismatch between people's skills and available jobs. Many examples were cited of extremely successful VTAE training provided to business and industry. However, the VTAE system is organized primarily to provide pre-employment training through full-time programs. The extent to which a VTAE college provides customized training to business and industry is dependent on local priorities.

In order for VTAE colleges to play a greater role in addressing workforce needs, several organizational needs must be addressed. This includes professional development and upgrading of instructors, development of curriculum that is competency-based and sufficiently "portable" to be taken out off campus and a statewide policy with funding guidelines that reward VTAE colleges for providing continuing education to business and industry.

3. Wisconsin's high school vocational programs which should provide a feeder to post-secondary vocational-technical education or the labor market are experiencing difficulty maintaining enrollments due to increased high school graduation requirements and university requirements. This is in spite of the fact that every high school district in the state is mandated by recent state law to offer a comprehensive vocational program.

## RECOMMENDATIONS

**1. The Wisconsin Council on Vocational Education recommends that the Wisconsin Board of Vocational, Technical and Adult Education (WBVTAE) and local VTAE colleges expand adult literacy programs and efforts with the assistance of additional state funding.**

Rationale

The need for adult literacy services far outstrips the resources VTAE can devote to the effort, yet employers have identified it as the major workforce need. VTAE is the logical deliverer of the service, but the resources of local VTAE colleges are strained as they attempt to meet the overwhelming needs.

The funds to support increased adult literacy efforts are needed particularly if Wisconsin is to successfully pull workers with special needs into the labor force. Testimony indicated that the workforce will need to train and hire handicapped, disadvantaged, single parents and homemakers, criminal offenders, adults in need of training and retraining and men and women interested in non-traditional occupations. These groups typically need extra academic support to succeed in regular vocational training. Such funding should encourage and support use of retirees and senior citizens in literacy education programs.

**2. The Wisconsin Council on Vocational Education recommends that the Department of Public Instruction (DPI) propose and implement an appropriate educational model that will provide every student with the maximum opportunity to become functionally literate.**

RATIONALE

As was stated in the Summary of Testimony and Conclusions, the workforce need most consistently expressed by employers is the need for employees who have sound basic skills in reading, writing, and communication. While the post-secondary vocational system addresses the problems of adult illiteracy, the Council believes that greater efforts should be made at the K-12 level to increase the literacy level of future entrants into the workforce. The Council further believes that the scope of the problem requires a state-level initiative.

**3. The Wisconsin Council on Vocational Education recommends that WBVTAE policies be updated to enable VTAE colleges to be more responsive to the changing needs of business and industry in Wisconsin, to be more active in economic development efforts, and to prepare the system to meet workforce needs of the 21st century.**

Rationale

While significant sources of new revenues may not be forthcoming, reallocation of existing revenues offers potentially viable solutions.

## Funding Issues

The extent to which a VTAE college provides continuing education and/or customized training is dependent on local priorities. The need for an adequately skilled labor force in the state is too broad in its implications to be left to local discretion. While state aid accounts for only 19% of VTAE college revenues, it can still be a powerful tool for affecting change. The current equalization formula for distributing revenues among the districts is based partially on FTE's. In simplistic terms, it is "more profitable" in terms of FTE's for a VTAE college to offer traditional associate degree courses than continuing education. FTE's and credits are determined according to criteria set some years ago and are based on assumptions that merit review, such as the number of hours a student spends on homework in an associate degree courses versus a continuing education course.

Thus, the criteria for determining credits and FTE's that impact the relative amount of state aid received by VTAE colleges should be re-examined to determine the extent to which they encourage continuing education.

This recommendation does not imply the elimination of full-time programs, but rather that continuing education be regarded and rewarded as equally important. In the ideal situation, continuing education is a logical continuation of full-time programs rather than a separate entity.

## Associate Degree and Vocational Diploma Distinction

The current distinction between vocational and associate degree coursework and programs should be examined. Consideration should be given to eliminating the administrative distinction between vocational and associate degree coursework in favor of a career ladder concept where any course in a given program could conceivably be applied to a certificate, vocational diploma, or associate degree.

The distinction between vocational and associate degree programs which evolved in the 1950's and 1960's was based on the premise that students in vocational programs learned hands-on skills with little or no knowledge of why. Associate degree courses, on the other hand, involved less hands-on and more consideration of theory (the why). Testimony from the hearing revealed that all workers need to understand the whys. Problem-solving is an area in which

workers are deficient, according to testimony. Conversely, technicians need to be able to use their hands as well as their minds. This vocational/associate degree distinction could be abandoned in favor of a career ladder concept in which students would take a sequence of courses that include theory and practice. They would take only those courses needed to continue to build upon courses already taken. Students could exit a program at a given level with a certificate, vocational diploma, or associate degree. Those exiting before completing a degree could return at any time for additional courses. This recommendation assumes that courses are competency-based so students can test-out of courses if they already possess the required competencies.

Eliminating the distinction could free up physical space that frequently is dedicated to one program or the other. It could allow more flexibility in utilizing instructors. It could save duplication of planning time, curriculum development, promotion, and the like. More importantly, programs would be designed to more closely meet the realities of the workplace.

## Transfer of VTAE Credits to the University of Wisconsin

The rationale for continuing to work on transfer of credits between VTAE colleges and University of Wisconsin campuses was summarized by one individual testifying in writing:

> The Vocational Education, Wisconsin University System and colleges throughout the state have to get together on transference of course credits from one school to another. This will enable the student and prospective employee the opportunity of continued education, without duplication of courses and cost incurred from one area of the state to another, while relocating for their job or job opportunities.

## Applied Technology Centers

The need for Applied Technology Centers developed jointly by VTAE colleges in the State of Wisconsin and the University of Wisconsin and a state policy on technology was restated in this hearing. One of those testifying indicated that as a state, Wisconsin must develop a new appreciation of the "technician" whom she referred to as the "glue of the workplace." She said that the technician must be "considered a new entity," and that 80% of all workers need training beyond high school, but less than a baccalaureate degree. A state-wide understanding of the importance of the technician and technology requires a state level vision. In "The Future of the Skilled Workforce in the Milwaukee Area Public Hearing, April 6, 1989," the Council stated:

> Currently, Wisconsin is one of only a few states in the nation [without] a state level policy. A state policy is an integral and essential guideline to the development and application of technical information. The Vocational, Technical and Adult Education (VTAE) system would provide the technology application to the workforce and the workplace...
>
> An Applied Technology Center (ATC) is a facility that assists business to become more efficient, increase productivity and quality or increase competitiveness through the use and application of technology. An ATC can have a specific focus, i.e., computerized manufacturing, or may have multiple applications such as lasers, composites, electronics, ceramics, or genetics. An ATC does not do basic research in technology as may be conducted by a university, but rather develops and assists businesses to apply technology to their specific industrial processes...
>
> Wisconsin needs to give high priority to the development of one or more Applied Technology Centers if it is to effectively compete with other states to attract and retain businesses. An ATC should be developed jointly by the technical colleges and the University of Wisconsin with substantial state funding to capitalize such a project.

## The Need to Teach Teamwork

Testimony indicated that employers considered the "softer" employee skills of problem-solving, interpersonal relations, communications, and teamwork to be the essential "basic skills" alongside literacy. One employer's written testimony stated:

> Technical and vocational programs prepare individuals for entry level employment by teaching them skills related to a job area. Becoming equally important are the softer skills and abilities; communication and interpersonal skills, team skills, cross-functional problem solving abilities, a sense for empowerment or willingness to act, and vision to constantly strive for improvement.

Another said, "We worry about the lack of hard working, dedicated and motivated young people." Additionally, statewide results of employer satisfaction with VTAE graduates have shown that graduates' "softer skills" are less strong than their technical competence.

Since these are statewide needs that cut across all businesses and industries, a state-level effort should be initiated to assist local VTAE colleges to respond to this need. The WBVTAE might consider a state-wide curriculum and instructor development project to assist local VTAE colleges to integrate the teaching of teamwork skills, problem-solving, communication, and the like, into a variety of program and continuing education courses.

## Commitment to Competency-Based Curriculum

Without a competency-based format, it is very difficult for students who are not full-time **(and the majority of VTAE students are <u>not</u> full-time)** to build upon their education while working. Additionally, it is difficult to take a traditional content-based curriculum off campus to business and industry. When curriculum is competency-based it is much more flexible and ultimately more accountable.

Funding through the Wisconsin Board of VTAE should be contingent on curriculum being designed in a competency-based format and formally on file in an accessible location.

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## COUNCIL AUTHORIZATION

Public Law 98-524 (98th Congress) amended "The Vocational Education Act of 1963 to strengthen and expand the economic base of the Nation, develop human resources, reduce structural unemployment, increase productivity, and strengthen the Nation's defense capabilities by assisting the States to expand, improve, and update high-quality programs of vocational-technical education, and for other purposes."

Specifically for the State Council on Vocational Education, the law states:

"STATE COUNCIL ON VOCATIONAL EDUCATION

"SEC. 112.(a) Each State which desires to participate in vocational education programs authorized by this Act for any fiscal year shall establish a State council, which shall be appointed by the Governor or, in the case of States in which the members of the State board of education are elected (including election by the State legislature), by such board. Each State council shall be composed of 13 individuals, and shall be broadly representative of citizens and groups within the State having an interest in vocational education. Each State council shall consist of --

"(1) seven individuals who are representative of the private sector in the state who shall constitute a majority of the membership--

"(A)" five of whom shall be representative of business, industry, and agriculture including-

"(i) one member who is representative of small business concerns; and

"(ii) one member who is a private sector member of the State job training coordinating council (established pursuant to section 122 of the Job Training Partnership Act), and

"(B) two of whom shall be representatives of labor organizations;

"(2) six individuals who are representative of secondary and postsecondary vocational institutions (equitably distributed among such institutions), career guidance and counseling organizations within the State, individuals who have special knowledge and qualifications with respect to the special educational and career development needs of special populations (including women, the disadvantaged, the handicapped, individuals with limited English proficiency, and minorities) and of whom one member shall be representative of special education.

In selecting individuals under subsection (a) to serve on the State council, due consideration shall be given to the appointment of individuals who serve on a private industry council under the Job Training Partnership Act, or on State councils established under other related Federal Acts.

"(b) The State shall certify the establishment and membership of the State council at least 90 days prior to the beginning of each planning period described in section 113(a)(1).

"(c) Each State council shall meet as soon as practical after certification has been accepted by the Secretary and shall select from among its membership a chairperson who shall be representative of the private sector. The time, place, and manner of meeting, as well as council operating procedures and staffing, shall be as provided by the rules of the State council, except that such rules must provide for not less than one public meeting each year at which the public is given an opportunity to express views concerning the vocational education program of the State.

"(d) Each State Council shall --

"(1) meet with the State board or its representatives during the planning year to advise on the development of the State Plan;

"(2) advise the State board and make reports to the Governor, the business community, and general public of the State concerning --

"(A) policies the State should pursue to strengthen vocational education (with particular attention to programs for the handicapped); and

"(B) initiatives and methods the private sector could undertake to assist in the modernization of vocational education programs;

"(3) analyze and report on the distribution of spending for vocational education in the State and on the availability of vocational education activities and services within the State;

"(4) furnish consultation to the State board on the establishment of evaluation criteria for vocational education programs within the State;

"(5) submit recommendations to the State board on the conduct of vocational education programs conducted in the State which emphasize the use of business concerns and labor organizations;

"(6) assess the distribution of financial assistance furnished under the Act, particularly with the analysis of distribution of financial assistance between secondary vocational

education programs and post-secondary vocational education programs;

"(7) recommend procedures to the State board to ensure and enhance the participation of the public in the provision of vocational education at the local level within the State, particularly the participation of local employers and local labor organizations;

"(8) report to the State board on the extent to which the individuals described in section 201(b) are provided with equal access to quality vocational education programs; and

"(9)(A) evaluate at least once every two years (i) the vocational education program delivery systems assisted under this Act, and under the Job Training Partnership Act, in terms of their adequacy and effectiveness in achieving the purposes of each of the two Acts and (ii) make recommendations to the State board on the adequacy and effectiveness of the coordination that takes place between vocational education and the Job Training Partnership Act and (B) advise the Governor, the State board, the State Job Training Coordinating Council, the Secretary, and the Secretary of Labor of these findings and recommendations."

"(e) Each State council is authorized to obtain the services of such professional, technical, and clerical, personnel as may be necessary to enable it to carry out its functions under this Act and to contract for such services as may be necessary to enable the Council to carry out its evaluation functions, independent of programmatic and administrative control by other State boards, agencies, and individuals.

# WISCONSIN COUNCIL ON VOCATIONAL EDUCATION

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APPENDIX A

## ISSUES FOR FUTURE CONSIDERATION

Following are issues of concern identified by the Council for future study and possible action.

1. Joint development of a manual for planning and implementing customized training programs for business in Wisconsin.

Discussion
Testimony indicated that no such resource exists now and that it would be invaluable both for business and the VTAE colleges.

2. Coterminous boundaries for VTAE, JTPA, Job Service, and CESA.

Discussion
"We are bound up with boundaries," one person testified. Another said that Wisconsin's economic development efforts are fragmented among a number of agencies and government bodies. In order to meet the needs of Wisconsin's labor market, all available resources must be utilized to fullest advantage with a minimum of duplication and waste. Developing coterminous boundaries for the state's major employment programs would eliminate vast amounts of administrative duplication and allow the agencies to focus their resources more on client needs.

Currently, coordination between these agencies requires a great deal of time and effort. VTAE college districts are frequently in two major JTPA Service Delivery Areas (SDAs) and sometimes three. Likewise the SDAs frequently must deal with two or three VTAE colleges. The "administrivia" of RFP responses, sign-offs, and correspondence all must be duplicated two or three times for each agency. These duplications would be unnecessary with coterminous boundaries. The concept includes Cooperative Educational Service Area (CESA) boundaries because more and more JTPA services are delivered to K-12 districts through CESAs.

3. Examination by K-12 and post-secondary vocational-technical education of the viability and effectiveness of advisory committees and improvement of ability to utilize advisory committees to greater advantage.

Discussion
One business leader testified that educators and business people often have difficulty working together because they are from "different worlds." Several others spoke of the need for enhanced business and education partnerships. The ability to mutually plan and collaborate is a management skill that can and should be taught, both to educators and business participants. It is clear from the number of existing vocational advisory committees at the secondary and post-secondary levels that the desire to collaborate is there as well as the structure, but results of this hearing and earlier research by the Council indicates that advisory committees are not as effective as they could be.

The Council reported in "A Study of Carl D. Perkins and JTPA Programs and Activities in Wisconsin 1986-87 and 1987-88" on the effectiveness of vocational advisory committees according to a representative group of secondary and post-secondary vocational educators. Half of the respondents, 56%, said the committees had a "significant" effect on vocational education. The remainder, reported "moderate" or "very little" effect. That study recommended:

> Given that the greatest barrier to involving the private sector was reported to be time for business people to participate, and secondly, time for vocational educators to participate, efficient and effective approaches to involving the private sector are needed. These approaches can be learned. Thus an opportunity exists for agencies and organizations in leadership roles to provide the needed technical assistance and encouragement.
>
> ...consider changing the name from advisory committee to employer committee as "advisory" connotes a limited role.

One individual suggested that advisory committees should also be utilized to assist in yearly reviews of programs to ensure that appropriate skills are being taught.

4. Distance-based learning to maximize both human resources and student attainment.

Discussion
Testimony indicated the overwhelming demand for adult literacy training and the continual need for all employees to upgrade their skills throughout their careers. Given the

projected shortfall of the pool of skilled employees (from whom to draw instructors), and the accelerating rate of instructor retirements, it is clear that finding vocational-technical teachers, especially in specialized high skill areas, will become an increasing problem. At the same time, the employed population in need of training and retraining is generally available in non-traditional hours--evenings and weekends.

Distance-based learning, especially the telecourse, offers the potential to address both of these needs. While electronic classes can never replace the human instructor, they can reach more people within a widely dispersed geographic area and free up the on-site instructor for more one-on-one instruction.

Distance-based learning is dependent on an electronic infrastructure that requires a number of years to develop and perfect. While progress has been made in developing the infrastructure, particularly within the VTAE system, telecourses are still seen as an alternative rather than an integral part of the vocational-technical delivery system.

The Council recommended a study of the feasibility of using televised instruction in all correctional facilities in the state in its 1988 "Report and Recommendations on Vocational Education in Wisconsin Correctional Institutions."

5. Policies in agencies providing funds for human resource development or economic development that reward collaboration and/or public/private leveraging of funds.

Discussion

The point was made earlier that as a state Wisconsin must do more with the economic development and human resource dollars it has, specifically in terms of eliminating duplication of effort.

The point was also made that businesses and educational agencies must work together more closely. Currently, the Wisconsin Jobs Council develops guidelines for minimally required levels of coordination among employment and training agencies. It is worth considering that the concept of reward for collaboration and coordination could be extended to all Wisconsin economic development efforts.

6. Categorical funding for high school vocational education in Wisconsin for "2 plus 2" programs that feature two years of an occupational program at the high school level followed by two years of post-secondary training.

Discussion
Focusing state dollars on the "2 plus 2" program could channel funds toward training workers for occupations in demand.

Testimony indicated that high school vocational programs have lost enrollments due to increased university entrance and high school graduation requirements. At the same time, Department of Public Instruction figures indicate that over half of the students do not continue additional education or training immediately after high school. This phenomenon is occurring at the same time severe labor shortages are forecast and becoming more apparent in the state.

As one letter of testimony stated:

> Historically, employers have developed partnerships with education systems that provided immediate or short-term results. In other words, cooperative relationships, scholarship dollars, and program funding have been prevalent at four-year degree program levels and/or associate degree two-year programs. Changing demographics suggest there will be fewer people than job opportunities in the near future. Employers must develop closer partnerships with teachers and students early in the secondary education system. This can be accomplished by school board involvement, project support and employer participation in classrooms.

Yet, due to increased requirements for more traditional general education courses for high school graduation and university entrance, many high school vocational programs are shrinking. This is in spite of the fact that by recent law, all Wisconsin high school districts are required to provide vocational programs.

Currently, approximately $7.3 million in annual federal dollars are the only categorical funds available for high school vocational programs in the state.

7. A uniform annual reporting format for VTAE college services to high school age students developed in collaboration with local VTAE colleges and an annual system-wide report on VTAE-public school coordination in Wisconsin.

Discussion
Section 38.12 (8)(c) of Wisconsin Statutes requires that local VTAE Colleges report annually to all school boards within

their boundaries on activities undertaken to satisfy requirements under Section 38.001(3)(a) to serve high school age students through articulation activities and contracting for services. While these reports are available, no uniform format exists. Thus it is impossible to compare activities among districts or to aggregate information for a statewide report of VTAE-public school coordination. Without comparable and consistent data, it is impossible to measure progress from year to year. The WBVTAE has authority under Section 38.04 (11)(a) to require a uniform reporting format for enrollment, fiscal, and program data.

In 1986, the Council, in a resolution on VTAE-public school coordination recommended, "that the Board undertake the responsibility to develop, annually, a system-wide report, based upon these district reports, on VTAE-public school coordination in Wisconsin."

8. The efforts of the Wisconsin Leadership Council on Agriculture Education to secure state funds to upgrade agriculture teachers and the need for additional state funds to upgrade secondary and post-secondary vocational instructors in all program areas.

Discussion

Rapidly changing technology requires that vocational instructors be continually upgraded in order to provide the state of the art instruction required by business and industry. The reality is that it is difficult for educational institutions to take vocational instructors "out of production" for industry experiences or formal classroom in-service. These specialized instructors are often difficult to replace and the problem is compounded by the year-round calendars in a number of VTAE colleges. Instructors in smaller rural districts do not even have access to local industries where they might increase their skill levels and awareness of new technologies. Thus to keep vocational instructors up-to-date in their professions requires financial resources above and beyond those needed for general education instructors.

9. Availability of state financial aid dollars to vocational-technical students and particularly employed adults who attend vocational-technical courses less than full-time.

Discussion
The need for continual training and retraining in all occupations was well-documented in the hearing. At the same time the need for workers to continue to be trained is increasing, the costs of vocational-technical education are increasing. The majority of those who attend VTAE colleges are part-time students who have jobs and families. It was stated at the hearing that for most people to be able to afford to attend a VTAE college, they must work and that for many, the cost has put a vocational-technical education out of reach. Most traditional financial aid packages favor traditional full-time students and are not intended for working adults even though they comprise the majority of VTAE students.

10. Review of VTAE promotional and curriculum materials to ensure that they depict older workers as students and/or employees.

Discussion
At the same time a critical labor shortage is becoming evident, workers age 50 and over are reportedly experiencing discrimination in hiring. An advocate testified that older workers are frequently passed over in favor of younger workers solely on the basis of age. While this might be attributed in part to societal prejudices and stereotypes about aging, proactive steps can be taken to portray older workers fairly and accurately in promotional and curricular materials. The same successful steps that the VTAE system has taken to depict men, women, and minorities in printed and audio-visual materials for all VTAE programs could be equally appropriate in addressing the problem of older worker discrimination.

11. Funding of a limited number of experimental school-community center pilot projects in which schools are housed in multi-purpose community centers.

Discussion
In that a certain number of new schools will be built to replace outdated physical plants, the timing for such pilot projects is appropriate.

K-12 schools are being called upon to be too many things--parents, social workers, psychologists, teachers. Schools should not have to pay for ancillary social services at the expense of teaching students. One possible approach to this problem is to house schools in multi-purpose community centers that can be utilized for the education of the whole family.

(The school district would not necessarily own the physical plant.) A school-community center could house medical and human service agencies which would not be the financial responsibility of the school, rather the community as a whole.

While this model would not necessarily be appropriate statewide, it might succeed in selected sites.

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FOR ADDITIONAL REPORTS

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